Addonics
TECHNOLOGIES

User Guide

Storage Rack

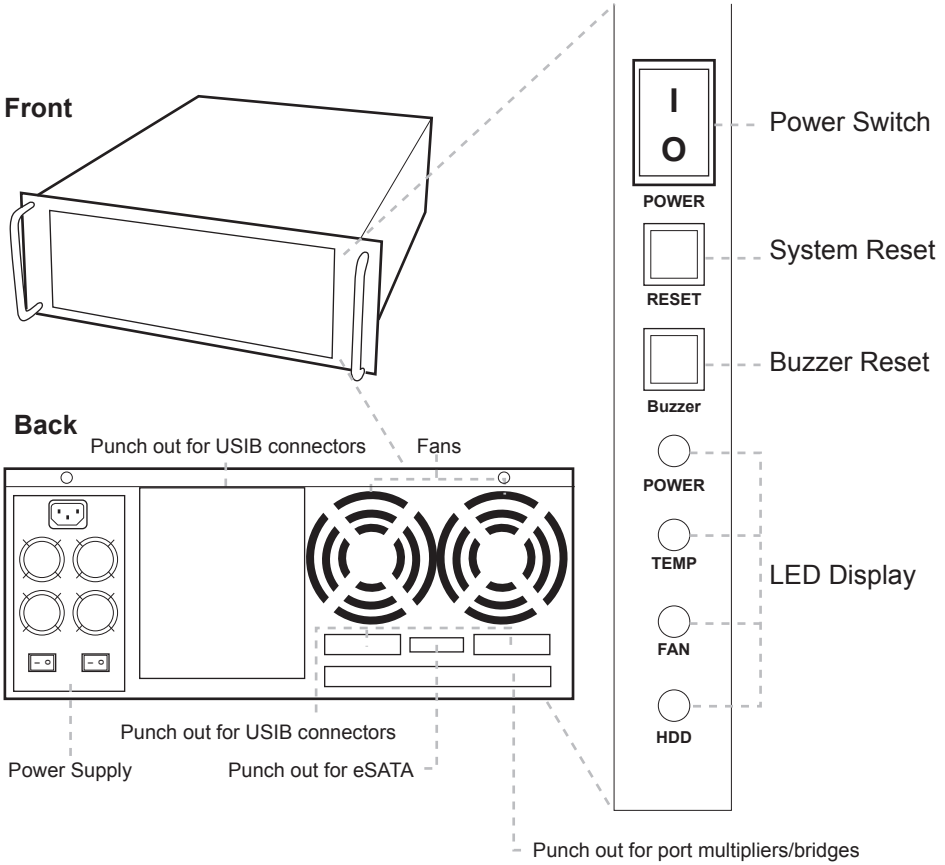
(SR46S4R5HM)

www.addonics.com

v8.1.11

Technical Support
If you need any assistance to get your unit functioning properly, please have your product information ready and contact Addonics Technical Support at:

Hours: 8:30 am - 6:00 pm PST
Phone: 408-453-6212
Email: http://www.addonics.com/support/query/



Power Switch: This is the switch to power on devices connected to the power supply. The power LED will light up to indicate power is supplied.
Note: The main power switch located at the back of the enclosure must be turned on first.

Reset Button: Not operational.

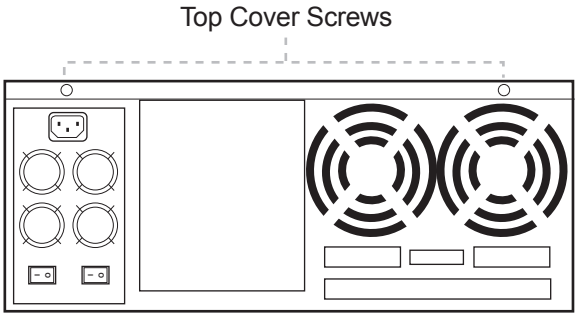
Buzzer Reset: Pressing the button stops the overheat buzzer from making a sound. The buzzer will make a sound when temperature inside the storage rack exceeds the temperature setting on the Thermal Management card.
Note: Buzzer reset switch does not silence the port multiplier buzzer.

Power LED: Lights up when the power switch is turned on.

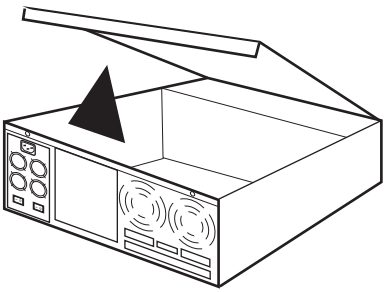
Temp LED: Lights up when temperature setting inside the storage rack exceeds the setting on the thermal card.

Fan LED: Normally on when fan is operational. If an abnormal condition is detected, the LED flashes.

HDD LED: Not operational.

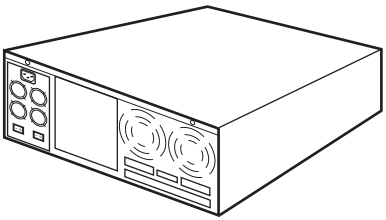


How to Remove the Top Cover:



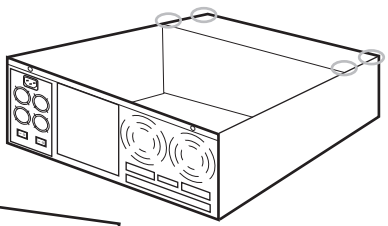
1. Locate the 2 screws at the back of the storage rack
2. Turn screws counterclockwise to loosen.
3. Lift the top cover and pull towards the rear end of the rack.

To Mount Back the Top Cover:

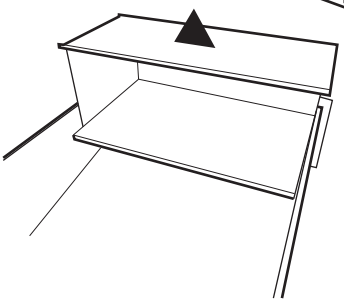


1. Align the top cover with the edges of the rack.
2. Lay it flat on the rack and slide it towards the front of the rack.
3. Turn screws clockwise to tighten.

How to Remove the 5 ¼" Drive Cage:

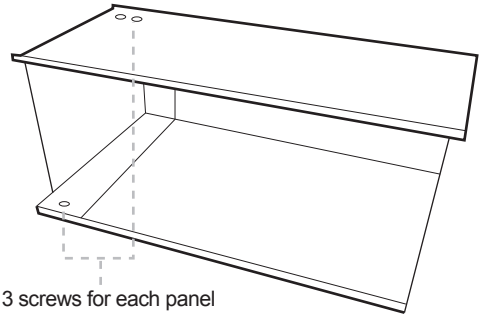


1. Locate the 4 screws on the drive cage.
2. Turn screws counterclockwise to loosen.
3. Lift the chassis up.

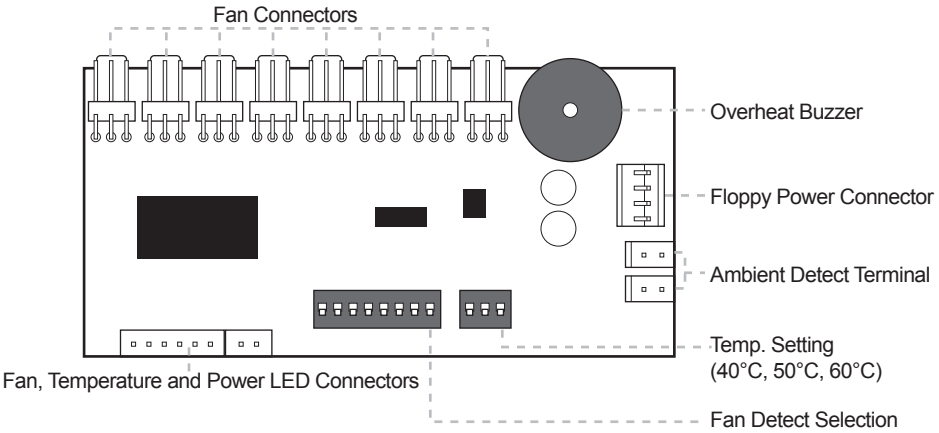


How to Remove the 5 ¼” Drive Bay Front Panels:

1. Locate the 3 screws for each front panel.
2. Turn screws counterclockwise to loosen.
3. Pull the front panel forward, away from the drive cage.



Thermal Management Card on the RAID Rack

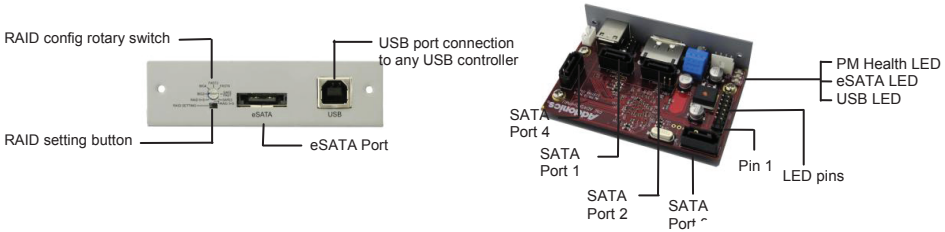


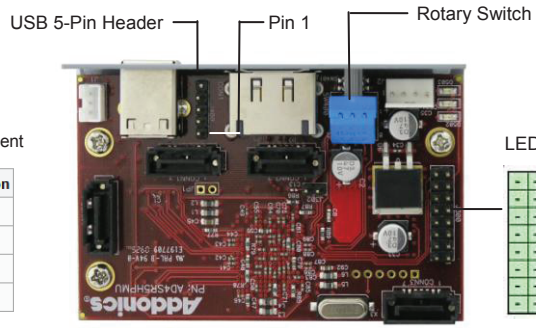
Features

Fan1 to Fan8 could be set either “ENABLE” or “DISABLE”. When all the fans are set on “DISABLE”, the Fan LED will have no light on.

When Ambient temperature (or temperature inside the storage rack) is over the set temperature, the LED will flash and the buzzer will sound.

4x1 Hardware Port Multiplier (AD4SR5HPMU-E)

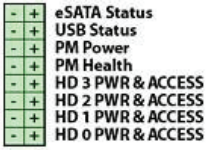




USB 5-Pin Header Pin Assignment

Pin	Name	Cable color	Description
1	VCC	Red	+5V
2	D–	White	Data –
3	D+	Green	Data +
4	GND	Black	Ground

LED Pin Assignment



LED Status

Drive Activity LED: Always ON. The LED blinks when there is drive activity.
PM Health: Always OFF when RAID volume is working correctly. The LED starts blinking when the RAID volume is degraded.
PM Power: Always ON when power is provided to the HPM.
USB Status: ON when USB port is connected.
eSATA Status: ON when eSATA port is connected.

Instruction for Special RAID Modes

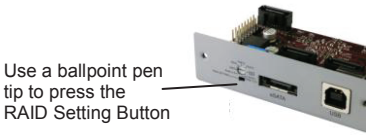
BIG 2 - 2 Drives Spanned

- **Note**: Do not connect more than 2 SATA drives to the hardware port multiplier. Doing so will hang the system when you configure the raid.
- For SATA drives with different capacities, the hardware port multiplier will use the smallest drive capacity of the 2 drives connected to create the total partition size.

FAST 2 - 2 Drives Striped
Note: Do not connect more than 2 SATA drives to the hardware port multiplier. Doing so will hang the system when you configure the raid.

Setting RAID on the HPM

1. Attach the SATA hard drives (up to 4) to the SATA ports on the Hardware Port Multiplier (HPM) using SATA cables. It is recommended to connect drives to the SATA ports 1 to 4 successively.
2. Set the Rotary switch to the RAID mode required.
3. Push the RAID setting button with a ballpoint pen tip while the HPM is turned off.



4. While holding the RAID setting button, turn on the HPM and SATA hard drives and continue to hold button for at least 5 seconds.

Note: The onboard LEDs for the eSATA and USB will start blinking while holding down the raid setting button. Once the raid setting button is released, the PM Health LED will blink 4-6 times. If the PM Health LED stops blinking, the raid set is set correctly. If the PM Health LED lights up as solid green, it is a bad setup. You need to repeat setting up the raid again.

Verify RAID Setting on the HPM

It is assumed that you have already connected the SATA drives and set up the raid mode when verifying the raid setting.

1. Disconnect the HPM from host.
2. Turn on the Storage Rack.
3. Hold down the RAID setting button with the tip of a ball point pen. Using the table below, verify if the LEDs are lighting up. The selected LEDs will light up.

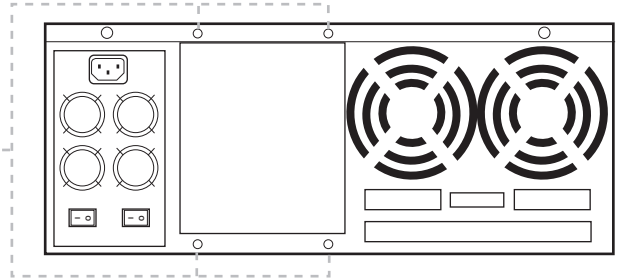
Note: Use the embedded LED's located on the HPM board as reference

5 – PM Health
7 – USB Status
8 – eSATA Status

RAID Mode	LEDs
BIG 2	LEDs 5, 7 & 8 all OFF
BIG 4	5 ON, 7 & 8 OFF
FAST 2	7 ON, 5 & 8 OFF
FAST 4	8 ON, 5 & 7 OFF
SAFE FAST	5 & 7 ON, 8 OFF
SAFE 2	5 & 8 ON, 7 OFF
RAID 3 + S	7 & 8 ON, 5 OFF
RAID 5 + S	5, 7 & 8 all ON

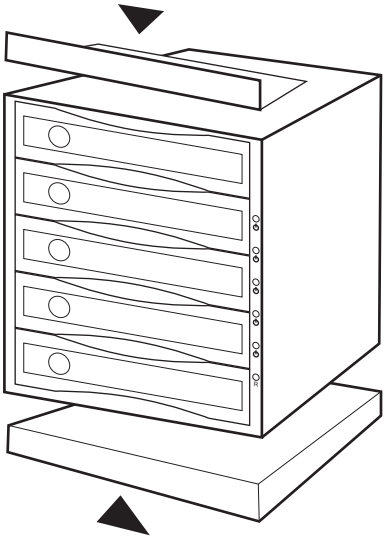
Installing the 4th Disk Array on the Storage Rack

a. Remove the back panel of the storage rack by loosening the 4 screws indicated below.

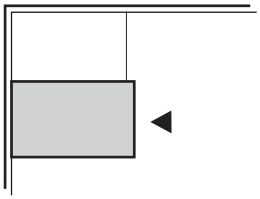


b. Secure the bottom bracket of the storage rack to the disk array using screws.

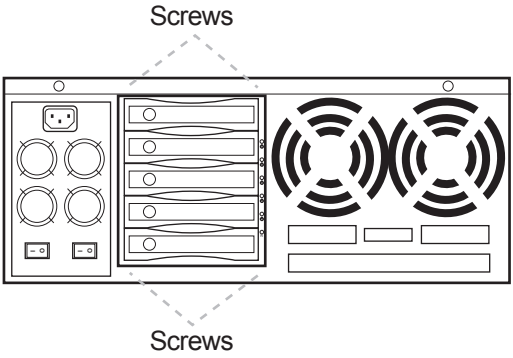
c. Secure the top bracket of the storage rack to the disk array using screws.



d. Slide the disk array into the storage rack.



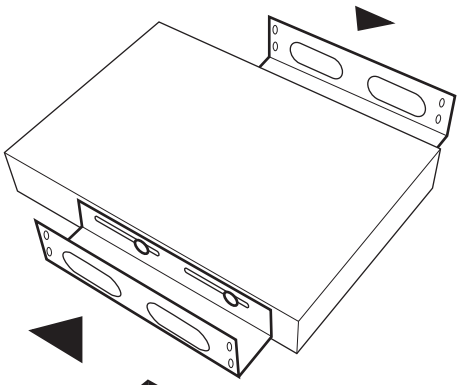
e. Secure the Disk array by screwing the top and bottom brackets to the frame of the storage rack.



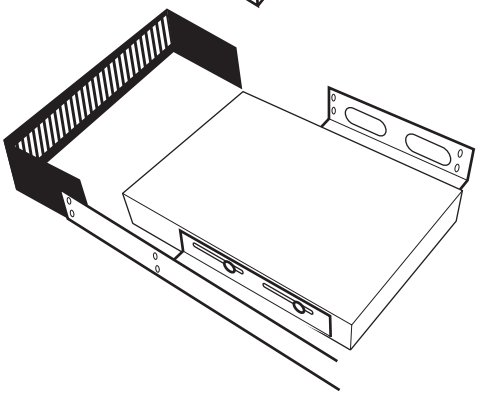
Installing Storage Devices on the Storage Rack

A. 3.5” hard drive

1. Attach the 3.5” to 5.25” mounting brackets onto both sides of the 3.5” SATA or IDE hard drive using the included screws.

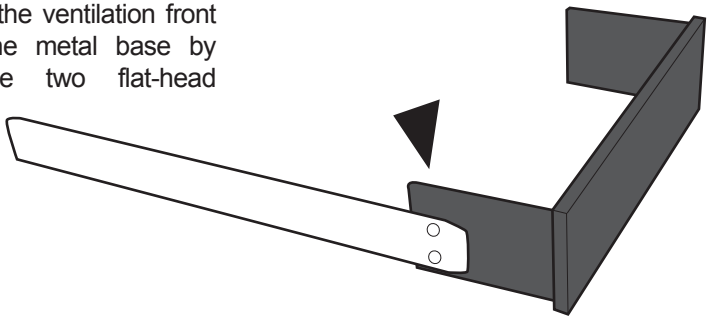


2. Attach the ventilation front panel and base onto one side of the mounting bracket using the black screws included with the Storage Rack.



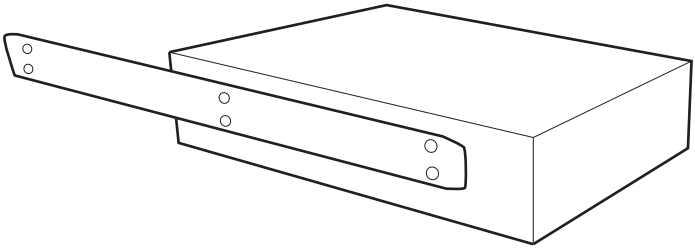
B. 5.25” Storage devices

1. Separate the ventilation front panel and the metal base by removing the two flat-head screws.

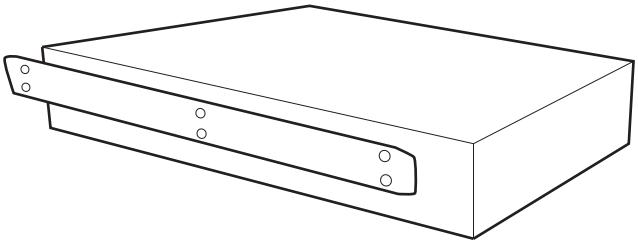


2. Attach the metal base onto the optical drive or other 5.25” storage device using the flat head screws from the ventilation front panel.

Optical Drive

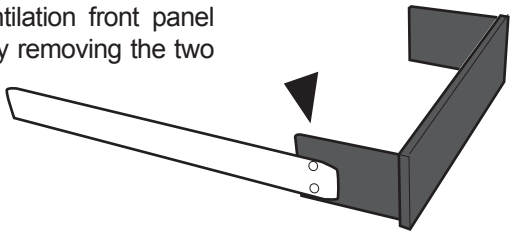


Addonics Drive Cradle

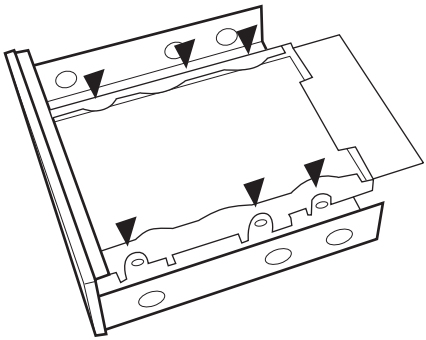


C. 3.5” Mobile Rack

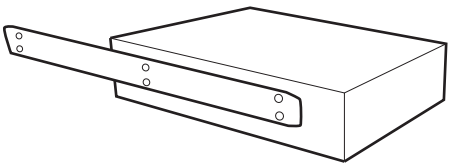
1. Separate the ventilation front panel and the metal base by removing the two flat-head screws.



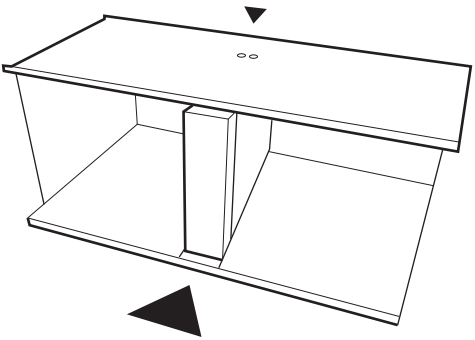
2. Attach the 3.5” drive cradle onto the 3.5” to 5.25” drive bay mounting bracket at the six aligned screw hole locations.



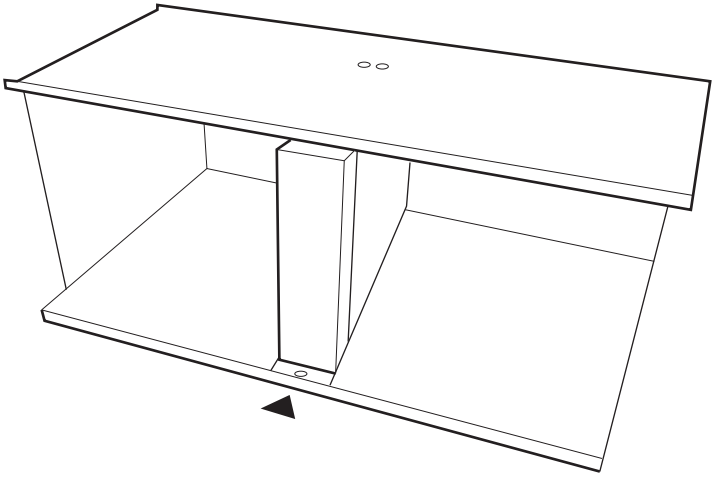
3. Attach the metal base onto the optical drive or other 5.25” storage device using the flat head screws from the ventilation front panel.



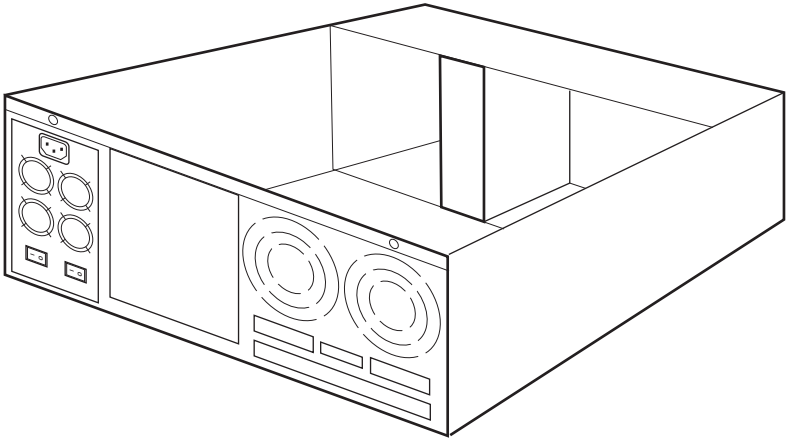
With the storage device connected, slide the metal base back into the drive cage. Secure the storage device onto the top of the drive cage using the included screws.



At the bottom of the drive cage, locate the metal base corresponding to the storage device inserted in the previous step and secure it onto the drive cage.

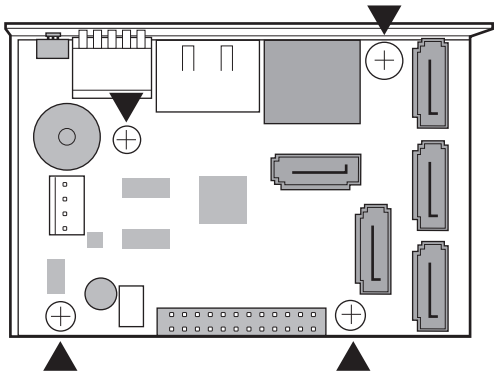


When you finished, install the drive cage now populated with the devices back into the Storage Rack.



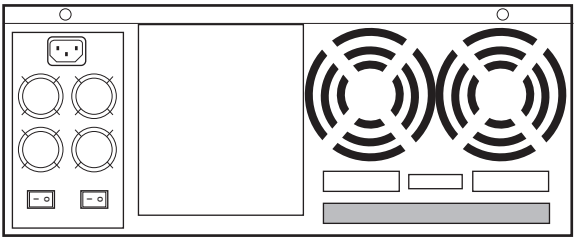
Installing Additional Bridge Boards on Mounting Poles Inside the Storage Rack

Separate PM or HPM from bracket by unscrewing 4 screws on the PCB. Install the PM or HPM onto the desired mounting pole.



Installing Bridge Boards onto Back Panel

Remove punch outs from the rear panel of the Storage Rack. Using the included screws, attach bridge board onto the desired back panel mounting location.

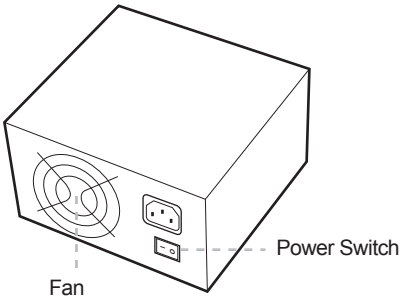


Connect storage devices onto the internally mounted PM or HPM, then connect the host connection onto the rear mounted bridge board.

SATA Device → **PM/HPM** → **Bridge Board**

Power Supply

This power supply provides 500W of power. Before turning on the main switch located on the front panel of the storage rack, turn on the power switch of the power supply.



Storage Rack DA with Port Multiplier Using Multilane Connection

Note: The Port Multiplier will only work with Port Multiplier aware multilane host controllers. It is compatible with multilane host controllers using the Silicon Image Chip SiI3124 & SiI3132.

When the port multiplier (PM) is connected to the multilane host controller with SiI3124 or SiI3132 chip, in the RAID BIOS of the host controller, you will only see one drive and that is the drive connected to SATA port 1 on the Port Multiplier.

All SATA drives connected to the PM will show in the SATARAID5 Array Manager.

Refer to the SATARAID5 Management Utility User Guide V1.6 for RAID implementation
http://www.addonics.com/support/user_guides/host_controller/SATARAID5-UserGuide_v1.60.pdf

Connecting the Power Cable and RAID Rack to the Computer

a. Connect the power cord provided from the wall outlet to the back of the rack.
b. Make sure the power is off (power LED light should be off).
c. Connect the RAID Rack to the computer using either the USB or eSATA cable.

CONTACT US

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